

What is claimed is:

1. A method for the treatment of ocular neovascularization in an individual afflicted with ocular neovascularization, comprising:  
effecting an increase in the amount of an endostatin in ocular tissues of an individual afflicted with ocular neovascularization to an ocular neovascularization inhibiting effective amount.
2. The method of claim 1 wherein the endostatin is a polypeptide with the amino acid sequence set forth in SEQ ID NO:1.
3. The method of claim 1, wherein the endostatin is a polypeptide fragment of the polypeptide with the amino acid sequence set forth in SEQ ID NO:1, a derivative of the polypeptide with the amino acid sequence set forth in SEQ ID NO:1, or a variant of the polypeptide with the amino acid sequence set forth in SEQ ID NO:1.
4. The method of claim 1, wherein the increase is effected by administering an exogenous endostatin to the individual.
5. The method of claim 1, wherein the increase is effected by causing an endostatin to be produced within the individual.
6. The method of claim 5, wherein the increase is effected by administering an effective amount of a viral vector comprising an endostatin-encoding nucleic acid to the individual.
7. The method of claim 6, wherein the viral vector is selected from the group consisting of an adenovirus, an adeno-associated virus, a retrovirus, and a lentivirus.

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8. The method of claim 7, wherein the viral vector is an adenoviral vector.
  9. The method of claim 5, wherein the increase is effected by implanting within the individual at least one microcapsule, wherein the microcapsule comprises cells that secrete endostatin.
  10. The method of claim 9, wherein the microcapsule comprises an alginate salt.
  11. The method of claim 10, wherein the microcapsule comprises sodium alginate.
  12. The method of claim 11, wherein the microcapsule comprises calcium alginate.
  13. The method of claim 12, wherein the microcapsule comprises poly L-lysine.
  14. The method of claim 9, wherein the cells comprise an exogenous endostatin-encoding nucleic acid.
  15. The method of claim 9, wherein the cells overexpress an endogenous endostatin-encoding gene.
  16. The method of claim 4, wherein between about 2.5 mg/kg per day and about 20 mg/kg per day of endostatin is administered to the individual.
  17. The method of claim 8 wherein the adenoviral vector is administered in an amount effective to provide for expression of endostatin by the individual to result in a concentration of endostatin of up to 1,000,000 ng/ml in the serum of the individual.

18. The method of claim 8 wherein the adenoviral vector is administered in an amount effective to provide for expression of endostatin by the individual to result in a concentration of endostatin of at least about 300 ng/ml in the serum of the individual.

19. The method of claim 18 wherein endostatin is expressed in the individual in a sufficient amount to result in a concentration of endostatin of about 300 ng/ml to about 3000 ng/ml in the serum of the individual.

20. The method of claim 19, wherein endostatin is expressed in the individual in a sufficient amount to result in a concentration of endostatin of about 300 ng/ml to about 1500 ng/ml in the serum of the individual.

21. The method of claim 6, wherein the vector is administered in an amount of from about  $10^8$  plaque forming units to about  $10^{14}$  plaque forming units.

22. The method of claim 8, wherein the vector is administered in an amount of from about  $10^8$  plaque forming units to about  $10^{14}$  plaque forming units.

23. The method of claim 9 wherein microcapsules are implanted in an amount effective to provide for expression of endostatin by the cells to result in a concentration of endostatin of up to 1,000,000 ng/ml in the serum of the individual.

24. The method of claim 8 wherein microcapsules are implanted in an amount effective to provide for expression of endostatin by the individual to result in a concentration of endostatin of at least about 300 ng/ml in the serum of the individual.

25. The method of claim 18 wherein the microcapsules are implanted in the individual in a sufficient amount to result in a concentration of endostatin of about 300 ng/ml to about 3000 ng/ml in the serum of the individual.

26. The method of claim 19, wherein microcapsules are implanted in the individual in a sufficient amount to result in a concentration of endostatin of about 300 ng/ml to about 1500 ng/ml in the serum of the individual.

27. The method of claim 6, wherein endostatin-encoding nucleic acid has the sequence set forth in SEQ ID NO:2.

28. A method according to any one of claim 1 wherein the ocular neovascularization is caused by a member selected from the group consisting of histoplasmosis, pathological myopia, angioid streaks, anterior ischemic optic neuropathy, bacterial endocarditis, Best's disease, birdshot retinochoroidopathy, choroidal hemangioma, choroidal nevi, choroidal nonperfusion, choroidal osteomas, choroidal rupture, choroideremia, chronic retinal detachment, coloboma of the retina, Drusen, endogenous Candida endophthalmitis, extrapapillary hamartomas of the retinal pigmented epithelium, fundus flavimaculatus, idiopathic, macular hole, malignant melanoma, membranoproliferative glomerulonephritis (type II), metallic intraocular foreign body, morning glory disc syndrome, multiple evanescent white-dot syndrome (MEWDS), neovascularization at ora serrata, operating microscope burn, optic nerve head pits, photocoagulation, punctate inner choroidopathy, rubella, sarcoidosis, serpiginous or geographic choroiditis, subretinal fluid drainage, tilted disc syndrome, Taxoplasma retinochoroiditis, tuberculosis, Vogt-Koyanagi-Harada syndrome, diabetic retinopathy, non-diabetic retinopathy, branch vein occlusion, central retinal vein occlusion, retinopathy in premature infants, rubecosis iridis, neovascular glaucoma, perifoveal telangiectasis, sickle cell retinopathy, Eale's disease, retinal vasculitis, Von Hippel Lindau disease, radiation retinopathy, retinal cryoinjury, retinitis pigmentosa,

retinochoroidal coloboma, corneal neovascularization due to herpes simplex keratitis, corneal ulcers, keratoplasty, pterygia, and trauma.

29. The method according to claim 28 wherein the ocular neovascularization is choroidal neovascularization.

30. A method according to claim 6, wherein the viral vector is administered intraocularly.

31. A method according to claim 30, wherein the viral vector is administered subretinally.

32. A method according to claim 30, wherein the viral vector is administered intravitreally.

33. A method according to claim 7, wherein the viral vector is a lentiviral vector.

34. The method of claim 33 wherein the lentiviral vector is administered in an amount effective to provide for expression of endostatin by the individual to result in a concentration of endostatin of up to 1,000,000 ng/ml in the serum of the individual.

35. The method of claim 34 wherein the lentiviral vector is administered in an amount effective to provide for expression of endostatin by the individual to result in a concentration of endostatin of at least about 300 ng/ml in the serum of the individual.

36. The method of claim 35 wherein endostatin is expressed in the individual in a sufficient amount to result in a concentration of endostatin of about 300 ng/ml to about 3000 ng/ml in the serum of the individual.

37. The method of claim 36, wherein endostatin is expressed in the individual in a sufficient amount to result in a concentration of endostatin of about 300 ng/ml to about 1500 ng/ml in the serum of the individual.

38. The method of claim 33, wherein the lentiviral vector is a bovine immunodeficiency viral vector.

39. The method of claim 38, wherein the bovine immunodeficiency viral vector is administered intraocularly.

40. The method of claim 39, wherein the bovine immunodeficiency viral vector is administered subretinally.

41. The method of claim 40, wherein the bovine immunodeficiency viral vector is administered intravitreally.

42. The method of claim 6, wherein the increase is inducibly effected by the administration to the individual of a viral vector that can cause the production in the individual of an agent that will induce the expression of the endostatin-encoding nucleic acid.